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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,214	09/16/2004	Daljit S. Ohbi	OHBI3001/REF	5192

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EXAMINER

O HERN, BRENT T

ART UNIT	PAPER NUMBER
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1772

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/507,214

Applicant(s)

OHBI ET AL.

Examiner

Brent T. O'Hern

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 30-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>AUG 5 2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-29 in the reply filed on 6 March 2007 is acknowledged.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 5, 28 and 29 recite the limitation "**which seal**" in lines 1-2 of all claims.

There is **insufficient antecedent basis** for this limitation in the claims.

The phrase "**derivative(s) thereof**" in claims 2 and 3, lines 2-3 of both claims, claim 5, lines 8-9 is vague and indefinite since it is unclear to a person of ordinary skill in the art what is a derivative thereof and what is not a derivative thereof.

Claim 9 recites the limitation "**the substituted group**" in line 2. There is **insufficient antecedent basis** for this limitation in the claim.

The phrase "**wherein the or at least one of the seals is as defined in claim 1**" in claim 23, lines 4-5 is vague and indefinite since Applicant appears to have made a typo, thus making it unclear what Applicant is trying to define.

Clarification and/or correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 8-9, 12-22 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaszas et al. (US 5,276,094).

Regarding claims 1, 8 and 9 Kaszas ('094) teaches a seal (*col. 9, ll. 49-55 and col. 1, ll. 14-16*), wherein the seal is formed from an elastomeric composition comprising:

- (a) an isobutylene polymer or co-polymer thereof (*col. 3, ll. 51-59*);
- (b) a cross-linking agent for the isobutylene polymer or co-polymer thereof, wherein the cross-linking agent is sulphur or a sulphur-donating compound, and wherein the cross-linking agent is free of peroxide curing agents (*col. 8, ll. 1-9*); and
- (c) an accelerator for the cross-linking agent, wherein the accelerator is a polysulphide compound (*col. 8, ll. 4-22*).

The phrase **“for a valve for use in a pharmaceutical dispensing device”** in claim 1, line 1 is not given any patentable weight since the applicant is introducing **use** limitations into the product claims (*see MPEP 2173 (q)*).

The phrases **“derived from a substituted dithiocarbonic acid or derivative thereof”** in claim 1, lines 8-9, **“wherein said polysulphide compound is derived from a substituted xanthic acid or derivative thereof”** in claim 8, lines 2-3 and

“wherein the substituted group in said polysulphide compound is an isopropyl group” in claim 9, lines 2-3 are **process limitations** in product claims and hence not given any patentable weight since patentability of a product does not depend on its method of production (*see MPEP § 2173.05(p)*).

Regarding claim 2, Kaszas ('094) teaches wherein the elastomeric composition comprises halogenated butyl rubber (*col. 3, ll. 60-64*).

Regarding claim 3, Kaszas ('094) teaches wherein the elastomeric composition comprises bromobutyl rubber and/or chlorobutyl rubber (*col. 3, ll. 60-63*).

Regarding claim 4, Kaszas ('094) teaches wherein the elastomeric composition comprises a blend of an isobutylene polymer or co-polymer thereof and a chlorine-substituted diene polymer or co-polymer thereof (*col. 3, ll. 51-63 and col. 4, ll. 33-59*).

Regarding claim 5, Kaszas ('094) teaches a seal wherein the seal is formed from an elastomeric composition comprising:

- (a) a chlorine-substituted diene polymer or co-polymer thereof (*col. 3, ll. 60-63*);
- (b) a cross-linking agent for the chlorine-substituted diene polymer or co-polymer thereof, wherein the cross-linking agent is sulphur or a sulphur-donating compound, and wherein the cross-linking agent is free of peroxide curing agents (*col. 8, ll. 1-9*); and
- (c) an accelerator for the cross-linking agent, wherein the accelerator is a polysulphide compound derived from a substituted dithiocarbonic acid (*col. 8, ll. 4-22*).

The phrase **“for a valve for use in a pharmaceutical dispensing device”** in claim 5, line 1 is not given any patentable weight since the applicant is introducing **use** limitations into the product claims (*see MPEP 2173 (q)*).

Regarding claim 12, Kaszas ('094) teaches wherein the polysulphide compound is substantially free from nitrogen, phosphorus and metallic elements (*col. 8, ll. 4-22*).

Regarding claim 13, Kaszas ('094) teaches wherein the elastomeric composition comprises up to 3 wt. % of the accelerator based on the total weight of the accelerator and polymer in the composition (*col. 8, ll. 4-17*).

Regarding claim 14, Kaszas ('094) teaches wherein the elastomeric composition comprises up to 1.5 wt. % of the accelerator based on the total weight of the accelerator and polymer in the composition (*col. 8, ll. 4-17*).

Regarding claim 15, Kaszas ('094) teaches wherein the weight ratio of the accelerator to the cross-linking agent in the elastomeric composition is in the range of from 1:1 to 3:1 (*col. 8, ll. 4-17*).

Regarding claim 16, Kaszas ('094) teaches wherein the seal further includes a mineral filler (*col. 8, ll. 60-62*).

Regarding claim 17, Kaszas ('094) teaches wherein the mineral filler is zinc oxide (*col. 8, ll. 60-62*).

Regarding claim 18, Kaszas ('094) teaches wherein the seal further includes a process aid (*col. 8, ll. 51-55*).

The phrase "**preferably a low molecular weight polyethylene**" in claim 18, lines 2-3 is optional, thus not limiting.

Regarding claim 19, Kaszas ('094) teaches one or more of an antioxidant (*col. 8, ll. 23-26*).

Regarding claim 20, Kaszas ('094) teaches a valve having a seal (*See col. 9, ll. 49-55 wherein an aerosol spray can inherently has a valve in order for it to be an aerosol spray can.*).

The phrase **“for use in a pharmaceutical dispensing device”** in claim 20, line 1 is not given any patentable weight since the applicant is introducing **use** limitations into the product claim (*see MPEP 2173 (q)*).

Regarding claims 21-22, Kaszas ('094) teaches a dispensing device having a valve (*col. 9, ll. 49-55*).

The phrase **“pharmaceutical”** in claims 21 and 22, line 1 of both claims is not given any patentable weight since the applicant is introducing **use** limitations into the product claim (*see MPEP 2173 (q)*).

The phrase **“which is a pharmaceutical metered dose aerosol inhaler device”** in claim 22, lines 1-2 is not given any patentable weight since the applicant is introducing **use** limitations into the product claim (*see MPEP 2173 (q)*).

Regarding claim 28, Kaszas ('094) teaches a seal which comprises a vulcanisate of an isobutylene polymer or co-polymer thereof (*Abs., ll. 11-18 and col. 8, ll. 63-67*), a cross-linking agent for the isobutylene polymer or co-polymer thereof (*col. 8, ll. 1-9*), and an accelerator for the cross-linking agent (*col. 8, ll. 4-22*), and

wherein the cross-linking agent is sulphur or a sulphur-donating compound and is free of peroxide curing agents (*col. 8, ll. 4-22*).

The phrases **“wherein the accelerator is a polysulphide compound derived from a substituted dithiocarbonic acid or derivative thereof”** in claim 28, lines 5-6

are **process limitations** in product claims and hence not given any patentable weight since patentability of a product does not depend on its method of production (see *MPEP* § 2173.05(p)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6-7 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaszas et al. (US 5,276,094) in view of Simons et al. (US 3,443,006).

Regarding claims 6-7, Kaszas ('094) teaches the seal discussed above, however, fails to expressly disclose wherein the elastomeric composition comprises a chlorine-substituted butadiene polymer/(2-chlorobuta-1,3-diene).

However, Simons ('006) teaches wherein the elastomeric composition comprises a chlorine-substituted butadiene polymer/(2-chlorobuta-1,3-diene) (*col. 3, ll. 9-16*) for the purpose of providing a seal with the desired balance of properties to form an effective seal (*col. 3, ll. 1-5*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to provide the above chlorine substituted polymer as taught by Simons ('006) in Kaszas ('094) in order to provide an effective seal with desired properties.

Regarding claim 29, Kaszas ('094) teaches a cross-linking agent (*col. 8, ll. 1-9*), and an accelerator for the cross-linking agent (*col. 8, ll. 4-22*), wherein the cross-linking agent is sulphur or a sulphur-donating compound and is free of peroxide curing agents (*col. 8, ll. 1-9*), however, fails to expressly disclose a seal comprising a vulcanisate of a chlorine-substituted diene polymer or co-polymer thereof.

However, Simons ('006) teaches wherein a seal comprising a vulcanisate of a chlorine-substituted diene polymer or co-polymer thereof (*col. 3, ll. 9-16*) for the purpose of providing a seal with the desired balance of properties to form an effective seal (*col. 3, ll. 1-5*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to provide a seal with the above composition as taught by Simons ('006) in Kaszas ('094) in order to provide an effective seal with desired properties.

The phrases **"wherein the accelerator is a polysulphide compound derived from a substituted dithiocarbonic acid or derivative thereof"** in claim 29, lines 5-7 are **process limitations** in a product claim and hence not given any patentable weight since patentability of a product does not depend on its method of production (*see MPEP § 2173.05(p)*).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaszas et al. (US 5,276,094) in view of Stevenson (US 4,695,609).

Kaszas ('094) teaches the seal discussed above, however, fails to expressly disclose wherein the polysulphide compound is diisopropyl xanthogen polysulphide.

However, Stevenson ('609) teaches wherein the polysulphide compound is diisopropyl xanthogen polysulphide (*col. 5, ll. 21-23*) for the purpose of providing efficient processing without the use of amines or other accelerator materials (*col. 4, ll. 41-54*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use the polysulphide compound of diisopropyl xanthogen polysulphide as taught by Stevenson ('609) in Kaszas ('094) in order to provide efficient processing without the use of amines or other accelerator materials.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaszas et al. (US 5,276,094) in view of Blok et al. (US 6,300,421).

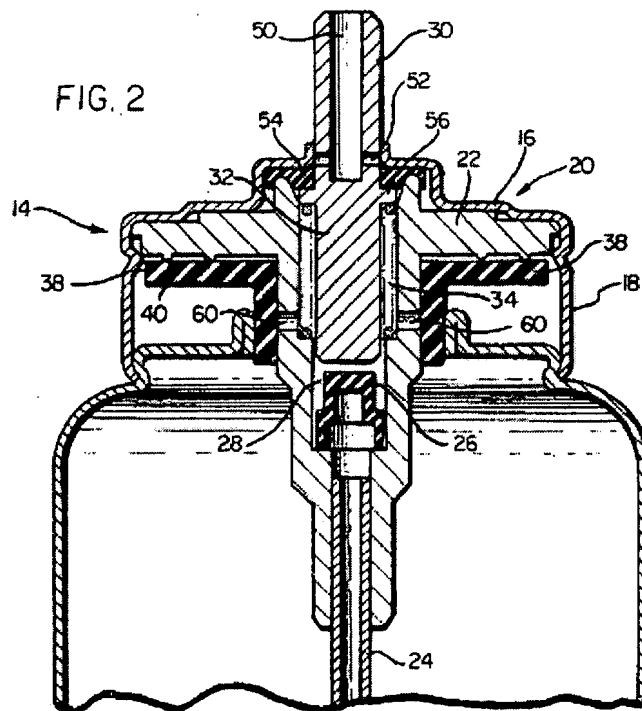
Kaszas ('094) teaches the seal discussed above, however, fails to expressly disclose wherein the polysulphide compound comprises three or more bridging sulphur atoms.

However, Blok ('421) teaches wherein the polysulphide compound comprises three or more bridging sulphur atoms (*col. 6, ll. 54-62*) for the purpose of providing effective coupling with the other components (*col. 6, ll. 50-53*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use a polysulphide compound comprising three or more bridging sulphur atoms as taught by Blok ('421) in Kaszas ('094) in order to provide effective coupling with the other components.

7. Claims 1, 8, 9 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klokke-Bethke et al. (US 5,370,862) in view of Kaszas et al. (US 5,276,094).

Regarding claims 1, 8 and 9, Klokke-Bethke ('862) teaches a seal (FIG-2, #54, #38 and #26 and col. 5, ll. 37-64),



however, fails to expressly disclose wherein the seal is formed from an elastomeric composition comprising:

- (a) an isobutylene polymer or co-polymer thereof;
 - (b) a cross-linking agent for the isobutylene polymer or co-polymer thereof,
- wherein the cross-linking agent is sulphur or a sulphur-donating compound, and wherein the cross-linking agent is free of peroxide curing agents; and

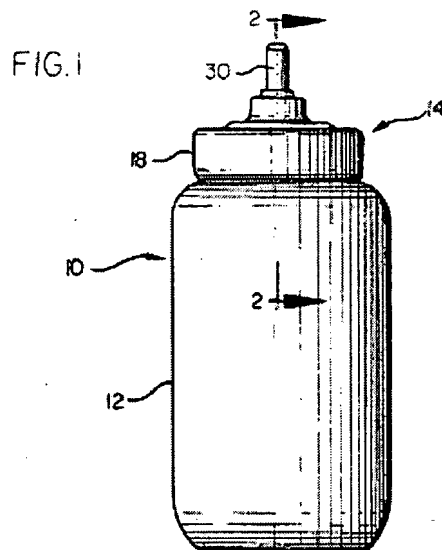
(c) an accelerator for the cross-linking agent, wherein the accelerator is a polysulphide compound.

However, Kaszas ('094) teaches wherein the seal is formed from an elastomeric composition comprising:

- (a) an isobutylene polymer or co-polymer thereof (*col. 3, ll. 51-59*);
- (b) a cross-linking agent for the isobutylene polymer or co-polymer thereof, wherein the cross-linking agent is sulphur or a sulphur-donating compound, and wherein the cross-linking agent is free of peroxide curing agents (*col. 8, ll. 1-9*); and
- (c) an accelerator for the cross-linking agent, wherein the accelerator is a polysulphide compound (*col. 8, ll. 4-22*) for the purpose of providing a strong seal with very low permeability to gases (*col. 2, ll. 36-42*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use the above elastomeric composition as taught by Kaszas ('094) in Klokke-Bethke ('862) in order to provide a strong seal with very low permeability to gases.

Regarding claims 23, 26 and 27, Klokke-Bethke ('862) teaches a dispensing apparatus comprising a valve body defining a chamber, a valve member extending movably through the chamber and through at least one annular seal cooperating with the valve member and the body (*See FIGs 1 and 2 wherein valve #30 extends through the container with seals 54, 38 and 26.*).



The phrases **“for dispensing pressurised fluid”** in claim 23, line 1, **“to regulate the discharge of fluid”** in claim 23, line 4, **“wherein the fluid to be dispensed comprises a liquid or particulate product as a solution or suspension in a carrier liquid comprising alcohol”** in claim 26, lines 2-3 and **“wherein the alcohol comprises ethanol”** in claim 27, lines 1-2 are not given any patentable weight since the applicant is introducing **use** limitations into the product claims (see *MPEP* 2173 (q)).

Regarding claim 24, Klokke-Bethke ('862) teaches a dispensing apparatus which comprises a pressurised dispensing container having a valve body provided with two annular valve seals through which a valve member is axially slidable, the seals being disposed at inlet and outlet apertures of a valve chamber (See *FIGs 1 and 2* wherein valve #30 extends through the container with seals 54, 38 and 26.)

The phrase **“so that the valve functions as a metering valve”** in claim 24, line 4 is not given any patentable weight since the applicant is introducing **use** limitations into the product claim (*see MPEP 2173 (q)*).

Regarding claim 25, Klokke-Bethke ('862) teaches a dispensing apparatus comprising a pressurised dispensing container operatively connected to the valve body (*FIG-1, #14 connected to #12*).

The phrase **“containing the fluid to be dispensed and a hydrofluorocarbon propellant comprising propellant type 134a or 227”** in claim 25, lines 3-4 is not given any patentable weight since the applicant is introducing **use** limitations into the product claim (*see MPEP 2173 (q)*).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-2172. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Brent T O'Hern
Examiner
Art Unit 1772
April 6, 2007


NASSER AHMAD 4/23/07
PRIMARY EXAMINER